



**NEW MEXICO
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December 21, 2012

**Ms. LaDonna Turner
Site Assessment Manager
U. S. EPA Region 6 (6SF-TR)
Technical and Enforcement Branch
Superfund Division
1445 Ross Ave. Suite 1200
Dallas, Texas 75202**

RE: Pre-CERCLIS Screening Assessments of the Section 15 Mine, Grants Mining District, New Mexico, Continued Monitoring Recommended

Dear LaDonna:

Enclosed for your review is the pre-CERCLIS screening assessment (PCS) for the Section 15 Mine that was prepared by the New Mexico Environment Department (NMED) Superfund Oversight Section (SOS). The Section 15 Mine (Site) is located in Section 15, T14N, R10W, in the Ambrosia Lake Mining Sub-District of the Grants Mining District in McKinley County, approximately 27 miles northwest of Grants and approximately 2.5 miles west of State highways 509.

The Section 15 Mine is a closed underground mine that was operated by the Homestake-Sapin Partners and later, Homestake Mining Company of California from 1958 to 1981. The Site was reclaimed in the early 1990s and in 1995 the New Mexico Energy, Minerals, and Natural Resources Department (EMNRD) determined that reclamation efforts at the Section 15 Mine met the criteria for Prior Reclamation under the New Mexico Mining Act.

NMED recommends that the Section 15 Mine remain under CERCLA review as part of the Grants Mining District Five Year Plan. NMED SOS also proposes to periodically review new data as it becomes available and incorporate it into the ground water conceptual model for the Grants Mining District. A generalized investigation of potential ground water impacts from former uranium mines within the Grants Mining District is recommended as part of regional ground water quality characterization. This mine should be included in the regional ground water quality characterization as this Site was considered a wet mine and discharged mine water to the surface. The Site should also be further evaluated to determine if surface conditions present unacceptable risk levels for a future use.

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Ms. LaDonna Turner
December 21, 2012
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Sincerely,

Phyllis Bustamante

Phyllis Bustamante
Acting Manager
Superfund Oversight Section

Enclosures: Pre-CERCLIS Screening Assessments Section 15 Mine Site

Copies with enclosures:

Mark Purcell, EPA
John Pfeil, NMEMNRD

Copies without enclosures:

Kathy Gibson, EPA
Janet Silva, NMED
NMED/GWQB/SOS Read file, December 2012



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DAVE MARTIN
Cabinet Secretary
BUTCH TONGATE
Deputy Secretary

Memorandum

To: LaDonna Turner, Site Assessment Manager, Response and Prevention Branch, U.S. Environmental Protection Agency, Region 6

From: Phyllis Bustamante, Acting Manager, Superfund Oversight Section, Ground Water Quality Bureau, New Mexico Environment Department

Date: December 21, 2012

RE: Pre-CERCLIS Screening Assessment of the Section 15 Mine, New Mexico: Continued Monitoring Recommended

Site name	Section 15	Alias	Homestake Sapin Mine No. 15
City	NA	State	New Mexico
Zip code	NA	County	McKinley County
Latitude	35.4364	Longitude	-107.8784

Site Physical Description:

The Section 15 Mine (Site) is located in Section 15, T14N, R10W, in the Ambrosia Lake Mining Sub-District of the Grants Mining District in McKinley County, approximately 27 miles northwest of Grants and approximately 2.5 miles west of State highways 509 (Figure 1). The Section 15 Mine is a closed underground mine that was operated by the Homestake-Sapin Partners and later, Homestake Mining Company of California from 1958 to 1981 (Ref. 1). The Site is located at approximately 7,000 feet above mean sea level.

The Site contained two distinct types of ore, colffinite and uraninite which were found in the A through D sandstone units of the Westwater Canyon member of the Morrison Formation (Ref. 1). There are no surface water features in the section and surface water runoff drains to an unnamed tributary of the Arroyo del Puerto which drains into the San Mateo Creek (Ref. 2).

Mining operations began in 1958, terminated in 1981 and in 1991 reclamation began. Reclamation included removal of surface structures, including two waste rock piles, sealing the vertical and decline shafts, sealing of boreholes, and scrap and trash burial or removal. Once mine workings had been eliminated from the surface, the Site was re-graded and reseeded (Ref. 1).

Site Identification:

The Section 15 mine is one of 97 legacy uranium mine sites identified within the Ambrosia Lake Mining Sub-District and one of the 151 within the Grants Mining District.

Site Summary:

Ownership:

According to the New Mexico Energy, Minerals and Natural Resources (EMNRD), Mining and Minerals Division (MMD) database as of June 1, 2007, the surface of the Section 15 Mine is owned by Jerry and Luann Elkins and the mineral rights are owned by Newmont Mining Corp. (Ref. 3). There is a discrepancy of mineral rights ownership between the MMD database and the Prior Reclamation Report which states mineral rights are owned by Cerrillos Land Company which is also referred to as the Santa Fe Pacific Railroad (Ref. 2). A brief internet search was conducted for this Pre-CERCLIS Screen to determine the relationship between the entities, but information was not readily available. Additional research will be necessary to confirm ownership of mineral rights at the Section 15 Mine.

Operations:

Operations at the Section 15 Mine began in 1958 by Homestake-Sapin Partners under a lease from Santa Fe Pacific Railroad. In 1968, Homestake-Sapin Partners became United Nuclear-Homestake Partners which then became Homestake Mining Company of California in 1981 (Ref. 1 & 2). In addition to the operators identified in reference 1, the MMD database indicated that the following organizations were involved at the Site as follows: 1957-1958 Utah Construction Co. & Centennial Development Co. sink shaft; 1958-1968 Homestake-Sapin Partners; 1961-1965 Rio de Oro; 1968-1981 United Nuclear-Homestake Partners; 1977 Ran-Con Corp. drives decline entry; 1981 Homestake Mining Co. No other specific information other than what is provided above regarding each organizations Site activities was obtained for this Pre-CERCLIS Screen.

During operations, approximately 30 acres of the surface of Section 15 were disturbed while the rest of the mining activities were below ground (Ref. 2 & 4). Operations at the mine were a modified room and pillar method used to recover and redistribute ore with blasting used to dislodge ore. Ore was removed using a slusher machine, and then transferred by truck to the main shaft for transport to the surface. Originally ore was removed through a vertical shaft which was later replaced by a decline (Ref. 1). The estimated volume of ore produced from the Section 15 Mine is 1,213,814 tons (Ref. 3).

Mine dewatering was performed by pumping water from the mine into a pond at the surface. References 1 or 2 did not indicate that the surface impoundment was synthetically lined, nor was there any water quality data identifying what analytes may have been in the discharged mine water. In addition to the dewatering pond, structures that existed during operations included vertical shafts, a declined shaft, three ventilation boreholes, two waste rock piles, and an office/hoist building (Ref. 2).

Post Closure:

Operations at the Section 15 Mine ceased in 1981. On August 30, 1994, Homestake Mining Company submitted Prior Reclamation reports to EMNRD for various mines including the Section 15 Mine Site (Ref. 5). In addition to Homestake's submittal, the Santa Fe Pacific Gold Corporation also submitted a letter to EMNRD on August 31, 1994 also requesting approval of Prior Reclamation under the New Mexico Mining Act (Ref. 6).

The reclamation report for the Section 15 Mine stated that beginning in August 1991 three phases of reclamation had been conducted at the site which included: 1) removal of buildings, headframes, and equipment; and shaft, decline, and borehole sealing and pond closure; 2) earthwork for site and waste pile recontouring; and 3) revegetation. Phase 1 included the removal of all buildings down to the foundation with all building materials, equipment, and trash either buried on site or removed from the site for disposal at an approved landfill. Boreholes and the vertical shaft were backfilled and the decline was sealed. Piping and other dewatering hardware were removed and disposed either on site or salvaged and the pond berms were pushed into the pond to fill the basin.

The second phase consisted of earthwork to reconfigure and cover waste piles and demolished structures. The work included waste pile reshaping, placement of top soil from borrow areas and recontouring to natural drainage (Ref. 1). The third phase was re-seeding of 30 acres in the site.

In response to Homestake's reclamation report and the requests for meeting Prior Reclamation under the New Mexico Mining Act, MMD conducted an inspection of the Section 15 Mine and on September 2, 1995 issued a letter to Fred Craft of Homestake Mining Company of California stating that the requirements of the New Mexico Mining Act and the substantive requirements for reclamation pursuant to the NMMA Rules had been satisfied at the Section 15 Mine Site.

Targets:

Airborne Spectral Photometric Environmental Collection Technology (ASPECT) operated by EPA has developed exposure rate contour maps of the Ambrosia Lake Mining Sub-District that includes the Section 15 (NM0027) Mine (Figure 2). The EPA ASPECT exposure rate measurements were performed in part to evaluate if surface reclamation has been effective in the long-term elimination of such threats to human health and the environment. The map estimates radiation exposure rates on the ground and can be used to identify hazardous levels of radiation. The ground surface exposure rates in and around the Section 15 Mine range between 20-40 microR/hr (Ref. 7).

Initial assessments for ground and surface water and soil pathways were not conducted for this Pre-CERCLIS Screen.

File review:

Files that were reviewed for this assessment are identified in the Reference Section below.

Site reconnaissance:

NMED has not conducted a site reconnaissance for this Pre-CERCLIS Screen.

Recommendation:

NMED recommends that the Section 15 Mine remain under CERCLA review as part of the Grants Mining District Five Year Plan. NMED SOS also proposes to periodically review new data as it becomes available and incorporate it into the ground water conceptual model for the Grants Mining District. A generalized investigation of potential ground water impacts from former uranium mines within the Grants Mining District is recommended as part of regional ground water quality characterization. This mine should be included in the regional ground water quality characterization as this Site was considered a wet mine and discharged mine water to the surface. The Site should also be further evaluated to determine if surface conditions present unacceptable risk levels for a future use.

Figure 1 - Section 15 Mine Site Location

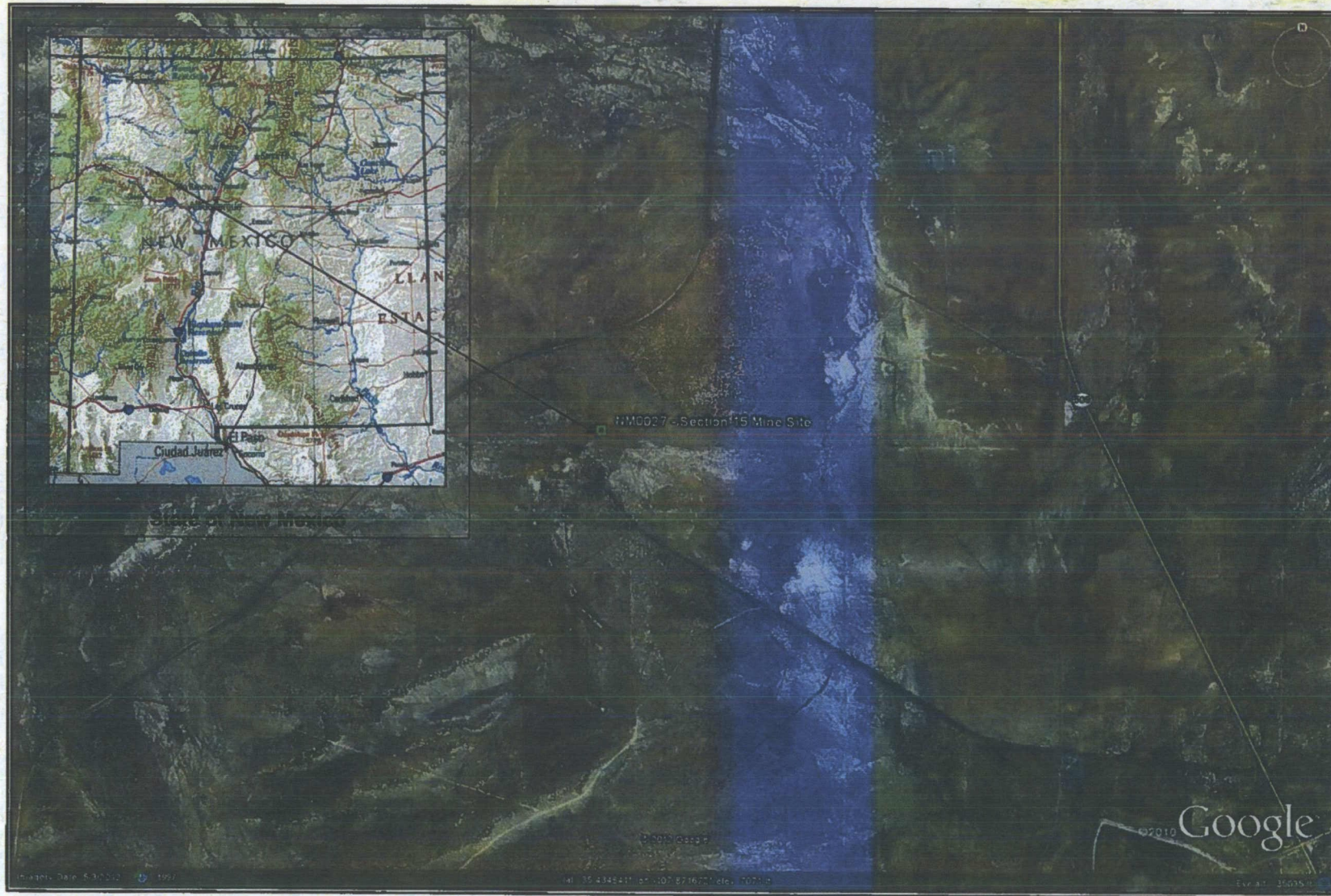
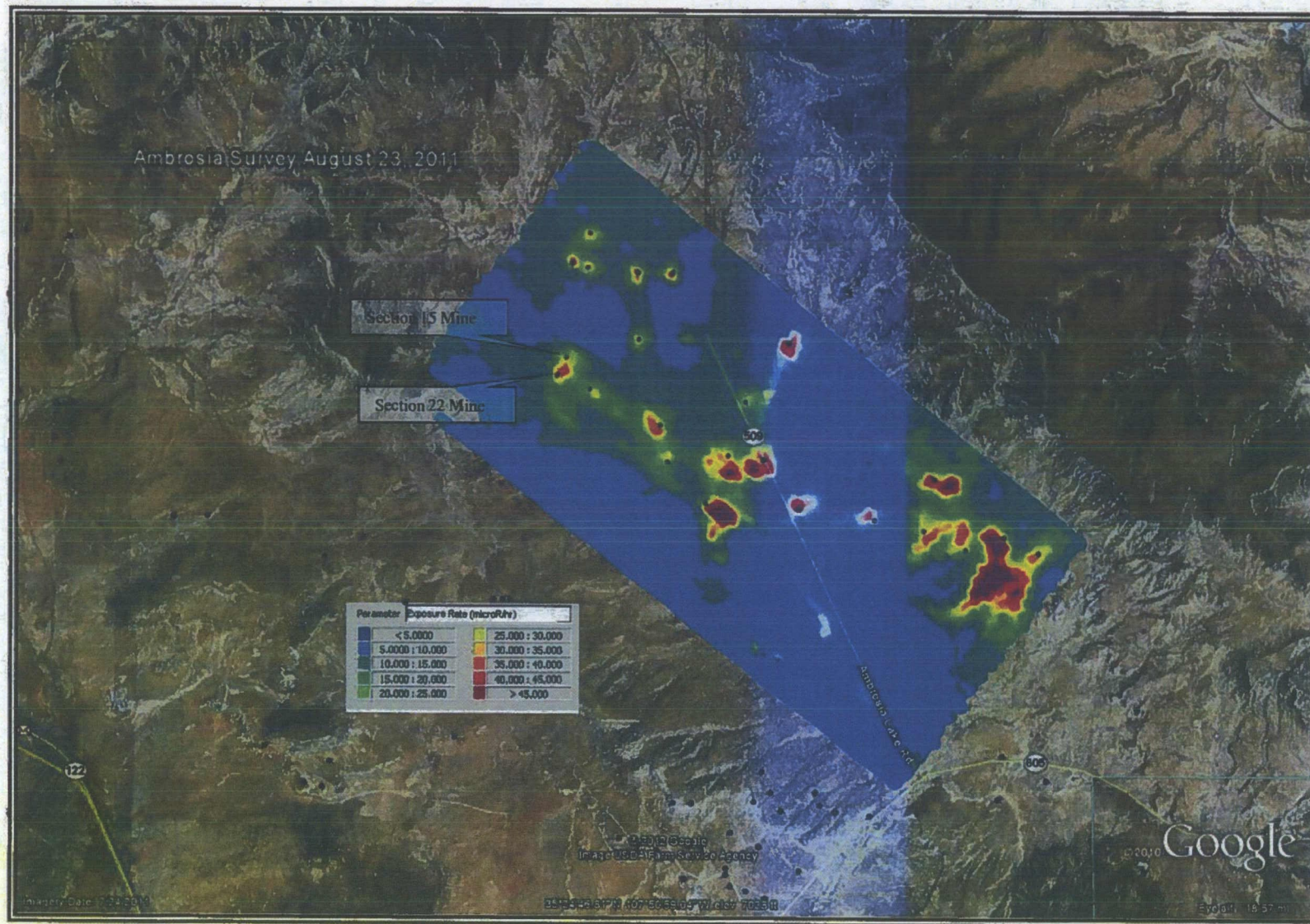


Figure 2 - ASPECT Ambrosia Lake Aerial Survey, Radiological Exposure Rates (microR/hr)



References

- 1 Reclamation Report, Section 15 MINE, Homestake Mining Company of California, Submitted to: Mining and Minerals Division, Energy, Minerals and Natural Resources Department, State of New Mexico, August 29, 1994, Compiled by AK GeoConsult, Inc.
- 2 Prior Reclamation Inspection Report and Recommendation for Release or Permit Requirement, Homestake Mining Company - California, Section 13, (T14N R10W), Section 15 (T 14N, R10W), section 23 (T 14N, R10W), Section 25 (T 14N, R 10W) and Section 32 (T 14N, R10W) Mines, Submitted in Partial Fulfillment of the New Mexico Mining Act section 69-36-7 U., Prior Reclamation, New Mexico Energy, Minerals and Natural Resources Department Mining and Minerals Division, Mining Act Reclamation Bureau, September 26, 1995.
- 3 New Mexico Energy, Minerals and Natural Resources Department, Mining Minerals Division database report provided to the New Mexico Environment Department, Ground Water Quality Bureau, June 1, 2007.
- 4 Homestake Mining Company letter, Addressed to Kathleen Garland, of the State of New Mexico, Energy, Minerals and Natural Resources Department, RE: Prior Reclamation Release, Sections 13,15, 23, 25 and 32 Mines, McKinley County, December 19, 1995.
- 5 Homestake Mining Company letter, Addressed to Holland Shepherd of the State of New Mexico, Energy, Minerals and Natural Resources Department, RE: Prior Reclamation of Mine Sites, August 30, 1994.
- 6 Santa Fe Pacific Gold Corporation letter, Addressed to John Lingo of the State of New Mexico, Energy, Minerals and Natural Resources Department, RE: Santa Fe Pacific Gold Corporation's Requests for Approval of Prior Reclamation, August 31, 1994.
- 7 US EPA Region 6, 2011, Airborne Spectral Photometric Environmental Collection Technology, Radiological Aerial Survey, Exposure Rate Contour Map of the Ambrosia Lake Mining Sub-District.